1-1-2007

The Effects Of An Education Program On Women'S Knowledge And Behavior During Menopause

Diana L. Stenger
Eastern Illinois University

THE EFFECTS OF AN EDUCATION PROGRAM ON WOMEN'S KNOWLEDGE AND BEHAVIOR DURING MENOPAUSE

STENGER

THESIS REPRODUCTION CERTIFICATE

TO: Graduate Degree Candidates (who have written formal theses)

SUBJECT: Permission to Reproduce Theses

The University Library is receiving a number of request from other institutions asking permission to reproduce dissertations for inclusion in their library holdings. Although no copyright laws are involved, we feel that professional courtesy demands that permission be obtained from the author before we allow these to be copied.

PLEASE SIGN ONE OF THE FOLLOWING STATEMENTS:

Booth Library of Eastern Illinois University has my permission to lend my thesis to a reputable college or university for the purpose of copying it for inclusion in that institution's library or research holdings.

Diana Stenger May 2, 2007

Author's Signature Date

I respectfully request Booth Library of Eastern Illinois University **NOT** allow my thesis to be reproduced because:

_____

_____

_____

_____ _____

Author's Signature Date

This form must be submitted in duplicate.

The Effects of an Education Program on Women's Knowledge and Behavior during Menopause

BY
Diana L. Stenger

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF

Master of Arts in Gerontology

IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY
CHARLESTON, ILLINOIS

2007
YEAR

I HEARBY RECOMMEND THAT THIS THESIS BE ACCEPTED AS FULFILLING
THIS PART OF THE DEGREE CITED ABOVE

4-23-07
DATE

Joann Snyder
THESIS DIRECTOR

4-30-07
DATE

DEPARTMENT/SCHOOL HEAD

4-23-07
DATE

Kathleen A O'Rourke
COMMITTEE MEMBER

4-23-07
DATE

Phyllis T. Crosiant
COMMITTEE MEMBER

Abstract

The purpose of this study was to determine if women's knowledge of perimenopause, menopause, and related health issues increased after participation in an educational workshop. The first objective was to determine if there was an increase in participants' knowledge of physiological and psychological changes often experienced during perimenopause, menopause, and related health issues. Two further objectives were to determine if women reported learned treatment options and made any behavioral health changes to manage perimenopause, menopause, and related health issues, from attending the educational workshop, during a 3-month follow-up telephone survey. A quasi-experimental pre-test and post-test design involved a purposive sample. Women age 40 to 60 years old voluntarily participated in the educational workshop. Participants completed a demographic questionnaire, a pre-test, a post-test, and a 3-month follow-up telephone survey. Pre-test and post-test scores were analyzed by a paired *t*-test with an alpha level of .05. The difference between the mean score for the pre-test and post-test reflected a significant difference t (168) =9.11, p=.000. The 3-month follow-up telephone survey was completed by 157 women who participated in the educational workshop. Ninety percent of the women reported increasing their knowledge of treatment options and 43% reported some form of behavioral health change as a result of attending the menopausal educational workshop. Initial participation by 221 women involved in the workshop reflects a strong interest surrounding mid-life phases in this rural Midwestern county.

Table of Contents

Figures

Appendixes

Acknowledgements

I would like to acknowledge Eastern Illinois University for being an outstanding institution for higher learning. The dedication of faculty and staff of Eastern Illinois University is to be commended. I would like to acknowledge my undergraduate faculty of study in Community Health. The caring and individualized professors and advisor, Dr. Deming, formed a confidence level for me that encouraged me to seek a master's degree.

The Master's in Gerontology program directed by Dr. Jeanne Snyder maintains the excellent standard of Eastern Illinois University. I would like to thank Dr. Jeanne Snyder for her kindness, patience, and encouragement throughout my master's studies. I would like to thank my other committee members for their guidance and expertise. Dr. Kathleen O'Rourke, many thanks to you for your expertise and guidance through methods and research, as well as, my thesis project. Dr. Phyllis Croisant, thank you for your statistical proficiency and supervision. To the whole committee, I would like to thank you for making me work to my fullest potential.

I would also like to thank Cathie Reynolds, DON at the Coles County Health Department, for valuing and applying a strong emphasis on higher education. Thank you for allowing me to alter my schedule to obtain my master's degree.

Dedication

I dedicate my educational opportunities and thesis work to my family. Without the encouragement and lasting support from my husband, Larry, my educational accomplishments would not have been completed. Heartfelt thanks to my husband, Larry, and my children, Landon, Lana, and Kasey. Support from my mother and sister assisted in the continued pursuit for my master's degree. Thanks to my entire family for the sacrifices and understanding throughout my educational endeavor.

List of Figures

Chapter 1

INTRODUCTION

Women experience many reproductive phases through their life span (U.S. Department of Health and Human Services, 2001). Perimenopause and menopause are phases of a natural and complex life evolution (Buxton-Blake, 2002). Women experience gradual decreases in hormones during the perimenopause and menopause phases; consequently, this can influence physiological changes such as cardiovascular disease, osteoporosis, vasomotor (hot flashes), and psychosocial stressors (U.S. Department of Health and Human Services, 2001). Individual women must evaluate and determine the best way to manage their perimenopausal and menopausal phases. Treatment options of symptoms and discomforts of menopause include an array of choices, which may become very confusing for women (Gonyea, 1998). Influencing factors that lead to deciding the best treatment or therapy for each individual often involve the individual, friends, healthcare providers, and alternative interventions (Alfred, Esterman, Farmer, & Pilotto, 2006).

Statement of Problem

Research concerning women's perimenopause, menopause, and related health issues will expand due to the aging baby boomer cohort in the United States (Gonyea, 1998). The baby boomer generation includes anyone born between 1946 and 1964, which today consists of women ages 43 to 61 (U.S. Department of Health and Human Services, 2001). Geller, Studee, and Chandra (2005) noted that the United States' population of all females experiencing menopause was close to half in 2005. The vast number of women in this cohort will be the largest that the healthcare industry has ever

seen (Gonyea, 1998). The average age of menopause is approximately 51 years (American Menopause Foundation, n.d.). With the trend of extended life expectancies, women are living approximately 30 years, or one-third of their life, after menopause (McKee & Warber, 2005). Demographics of the Midwestern county, where the present study was completed, revealed a population of 10,471 people ranging between the ages of 45 and 64 years. Fifty-two percent of the residents are women with 20.6% between the ages of 45 and 64 years (Illinois Department of Public Health, 2006).

Menopausal management is surrounded by controversial studies involving multidisciplinary researchers including primary healthcare practitioners, scientists, feminists, patients, and media (Gannon & Stevens, 1998). More focus on the understanding of perimenopause, menopause, and related health issues, as they relate to educational intervention programs, is needed due to the growing population and concerns of women (Towey, Bundy, & Cordingley, 2006). Moving through the next phase of life, women will seek knowledge and treatment of the challenges experienced with hot flashes, night sweats, altered psychological states, and sexual changes associated with perimenopause, menopause, and related health issues (Gonyea, 1998). The controversial treatment regimes and complexity of the perimenopausal, and menopausal reproduction phases exposes the need for further research (Buxton-Blake, 2002).

Purpose of the Study

The purpose of this study was to determine if women's knowledge of perimenopause, menopause, and related health issues increased after participation in an educational workshop.

Research Objectives

1. To determine if there was an increase in participants' knowledge of physiological and psychological changes, often experienced during perimenopause, menopause, and related health issues, by attending an educational workshop.
2. To determine, 3-months after attending an educational workshop, if there was an increase in participants' knowledge of treatment options to manage perimenopause, menopause, and related health issues.
3. To determine, 3-months after attending an educational workshop, if participants' made any behavioral health changes.

Hypotheses

1. It was hypothesized that perimenopausal and menopausal women will increase their knowledge of physiological and psychological symptoms during perimenopause and menopause, after attending an educational workshop.
2. It was hypothesized that perimenopausal and menopausal women will increase their knowledge of treatment options to manage perimenopause, menopause, and related health issues after attending an educational workshop.
3. It was hypothesized that participants will make behavioral health changes during a 3-month follow-up after the educational workshop.

Definition of Terms

Alternative Medicine: Alternative medicine is used in place of conventional medicine. An example of an alternative therapy is using a special diet to treat cancer instead of

undergoing surgery, radiation, or chemotherapy that has been recommended by a conventional doctor (National Center for Complementary and Alternative Medicine, 2006).

Baby Boomer Cohort: Persons born from 1946 to 1964 (U.S. Department of Health and Human Services, 2001).

Biomedical Model: Of, relating to, or involving biological, medical, and physical science (Merriam-Webster Online Dictionary, 2006).

Cardiovascular: Of, relating to, or involving the heart and blood vessels (Merriam-Webster Online Dictionary, 2006).

Complementary Medicine: Complementary medicine is used in combination with conventional medicine. An example of a complementary therapy is using aromatherapy to help lessen a patient's discomfort following surgery (National Center for Complementary and Alternative Medicine, 2006).

*Disease: A*n impairment of the normal state of the living animal or plant body or one of its parts that interrupts or modifies the performance of the vital functions, is typically manifested by distinguishing signs and symptoms, and is a response to environmental factors (malnutrition, industrial hazards, or climate), to specific infective agents (worms, bacteria, or viruses), to inherent defects of the organism (genetic anomalies), or to combinations of these factors (Merriam-Webster Online Dictionary, 2006).

Hormone Therapy: The administration of estrogen often along with a synthetic progestin especially to ameliorate the symptoms of menopause and reduce the risk of postmenopausal osteoporosis (Merriam-Webster Online Dictionary, 2006).

Medicalization of Menopause: Medical healthcare sector focuses on women's changes during menopause as a disease rather than a naturally occurring reproductive phase (Kleinman, Kinchy, & Handelsman, 2005).

Menopause: the natural cessation of menstruation that usually occurs between the ages of 45 and 55; *also*: the period during which such cessation occurs -- called also *climacteric* (Merriam-Webster Online Dictionary, 2006).

Menopause: is the time when a woman's menstrual cycle is absent for 12 consecutive months (U. S. Department of Health and Human Services, 2001).

Osteoporosis: A condition that affects especially older women and is characterized by decrease in bone mass with decreased density and enlargement of bone spaces producing porosity and fragility (Merriam-Webster Online Dictionary, 2006).

Perimenopause: the period around the onset of menopause that is often marked by various physical signs (as hot flashes and menstrual irregularity) (Merriam-Webster Online Dictionary, 2006).

Perimenopause: The gradual onset of menopause, when hormones gradually decrease, which can begin as early as 3 to 5 years before the onset of menopause (U. S. Department of Health and Human Services, 2001).

Postmenopause: 1: having undergone menopause, 2: occurring or administered after menopause (Merriam-Webster Online Dictionary, 2006).

Psychosocial: Involving both psychological and social aspects or relating social conditions to mental health (Merriam-Webster Online Dictionary, 2006).

Reproduction: The process by which plants and animals give rise to offspring and which fundamentally consists of the segregation of a portion of the parental body by a sexual or

an asexual process and its subsequent growth and differentiation into a new individual (Merriam-Webster Online Dictionary, 2006).

Vasomotor: Of, relating to, affecting, or being those nerves or the centers (as in the medulla and spinal cord) from which they arise that supply the muscle fibers of the walls of blood vessels, include sympathetic vasoconstrictors and parasympathetic vasodilators, and by their effect on vascular diameter regulate the amount of blood passing to a particular body part or organ (MedlinePlus, Merriam-Webster Online Dictionary, 2006).

Chapter 2

LITERATURE REVIEW

The literature review will include research of perimenopause, menopause, and related health issues. Historical background surrounding women's reproductive phases and the complexity of menopausal symptoms, treatments, programs and education will be discussed. The review will incorporate information on programs addressing menopausal symptoms, treatment, knowledge through psycho-educational research, such as routine exercise, and choices for healthier behavioral life changes.

Historical Development

The understanding of menopause as it is related to educational interventions could not be discussed without first looking at the complexity of historical development surrounding women of today. Women of the baby boomer era, like their male counterparts, have driven change throughout their lives as evidenced by their representative size and societal changes (Gonyea, 1998). The baby boomer generation includes anyone born between 1946 and 1964 (Geller et al., 2005). One societal change is alternative decisions in fertility and birth control. Mid-life women of today have experienced advancements in technologies to allow more control over reproductive life phases (Gonyea, 1998).

Women experience many reproductive phases through their life span (U.S. Department of Health and Human Services, 2001). The natural process of an average woman's ability to reproduce diminishes gradually around the age of 40 years. Women's menstrual cycle irregularities and metabolic alterations in midlife are results of fluctuating and decreasing levels of estrogen and progesterone hormones (U.S.

Department of Health and Human Services, 1995). The final reproductive phase can be broken down into perimenopausal, menopausal, and postmenopausal. Fluctuation of hormones throughout the women's cessation of menstruation contributes to the experiences of hot flashes, night sweats, and numerous related symptoms (U.S. Department of Health and Human Services, 1995). The gradual onset phase is called perimenopause, which can begin as early as 3 to 5 years before the onset of menopause (U. S. Department of Health and Human Services, 2001). Menopause is known as the time when a woman's menstrual cycle is absent for 12 consecutive months (American Menopause Foundation, n.d.). The completion of menopause is known as the postmenopausal phase (U. S. Department of Health and Human Services, 2001). Perimenopause, menopause, and postmenopause are one portion of a natural life evolution that can be very complex (Shute, 2002). Moving through the next phase of reproduction, menopausal women will contribute to the demands in advancements in technology and medical practice (Gonyea, 1998).

Historically, women in America have reported experiencing hot flashes, night sweats, altered psychological states, and sexual changes associated with perimenopause, menopause, and postmenopause (Lock, 2005). In the 19th century, medical practitioners scarcely focused on women during the menopausal years. By the early 20th century, physicians' focus was on educating women about the physiological changes occurring and reassuring women through their symptoms and changes. In the early 1940's, medications developed and approved by the Food and Drug Administration for symptomatic relief of menopause occurred, but they were used cautiously by physicians. A majority of physicians strongly believed in education and preventative management for

women experiencing mid-life changes. Middle-class, educated women in the mid 1950's began to broach hormone therapy treatment options with their physicians. Education on hormone replacement therapy was driven by pharmaceutical companies' advertisements in women's journals. The development of hormone replacement drugs changed how menopausal women were treated. Declining estrogen hormone levels have been a major focus since the mid 1970's. The medical industry shifted their thought process from menopause as a naturally occurring latent phase of reproduction to that of a disease-like state (Lock, 2005). Physicians' focus from educating women through natural menopausal events and symptoms has drastically moved into a "Medicalization of Menopause in America" (Houck, 2005).

Perimenopausal and menopausal women are challenging medical practitioners to refocus menopause as a naturally occurring reproduction phase (Houck, 2005). Geller et al. (2005) noted that only 10% to 25% of women actually look to their healthcare provider for relief of menopausal symptoms. Another 66% of women experiencing menopausal symptoms have sought alternative paths while embracing their natural life reproductive phases (Houck, 2005). Demands of alternate therapies, refusal to view menopause as "getting old", and renaming symptoms as "power surges" are just the beginning of the need for life-long education for women during this phase of life (Houck, 2005).

Symptoms

Menopausal symptoms are described by women as hot flashes, night sweats, mood swings, weight gain, and sexual dysfunction to mention a few (U. S. Department of Health and Human Services, 2001). Known facts of physiological aging have been

documented to include a decrease in senses such as taste, smell, and hunger sensations. Eating behaviors, unintentional weight loss, and physical activity can compound the natural menopausal demands on a woman's body (Hays, Bathalon, Roubenoff, McCrory, & Roberts, 2006). Anthropologist Margaret Lock noted the external biological changes that occur with women during menopause are interconnected to the psychosocial and cultural layering of an individual. The menopausal symptoms of night sweats and hot flashes experienced are different from those symptoms of irregular menstruation during perimenopause. Related health issues such as heart disease and osteoporosis occur among postmenopausal women to varied degrees (Lock, 2005). Overall, women have reported symptoms that interfere and alter lifestyles during the menopausal phase.

Treatments

Treatment options include lifestyle adjustments through diet, exercise, mind-body therapies, and medication regimes to improve menopausal management (McKee, & Warber, 2005). Beliefs, knowledge, and attitudes of women in the mid-life phase and the professionals who serve them affect the way perimenopause, menopause, and related health issues are managed (Towey et al., 2006). Searching for measures to relieve, improve, and prevent menopausal symptoms is very complex which was noted throughout the literature review.

Medical attempts to relieve menopausal symptoms began with the development of synthetic hormones (Houck, 2005). A Women's Health Initiative (WHI), large-scale, longitudinal study sponsored by the National Institutes of Health (NIH), began in 1993. The WHI wanted to determine if hormone therapy would minimize menopausal symptoms while also preventing cancer, heart disease, osteoporosis, and other related

health risks. Researchers hypothesized that hormone replacement therapy (HRT) would give promise of preventing health risks associated with the menopausal aging process and relief to menopausal symptoms. Health related risks included cardiovascular disease (i.e., heart attacks), stroke, and vasomotor symptoms known as hot flashes (Wassertheil-Smoller, 2005). Decreases in estrogen hormones are associated with thinning bone structures known as osteoporosis. Risk factors for osteoporosis were prevalent in a narrow age range of 48 to 52 year-old women (McKnight, Steele, Mills, Gilchrist, & Taggart, 1995). HRT in the early phases of the study was thought to prevent or slow down the process of osteoporosis and cardiac disease, while also relieving menopausal symptoms. However, in 2002, the WHI study reported that women taking HRT in clinical trials increased their risk for cancer, heart disease, and stroke (Wassertheil-Smoller, 2005).Women around the world began to question the significance of HRT. Print, radio, and television media were saturated with the pros and cons of HRT (Seaman, 2005). Schonberg and Wee (2005) studied communication between women and their healthcare providers after the release of the WHI report. Findings revealed that few educational discussions by primary healthcare providers included medical management of osteoporosis, heart disease, diet, exercise, and related health risks (Schonberg & Wee, 2005). Baby boomers and perimenopausal women learned of their mothers and grandmothers experiences from the results of the World Health Initiative study (Gonyea, 1998). The knowledge gained from the important outcomes of the WHI study gave women a reason to begin speaking out and exercising their individual right to decide whether to use hormone replacement therapy. The healthcare industry must review the

holistic individual to understand the best treatment of menopause and the related risks that accompany the mid-life phase (Buxton-Blake, 2002).

Related health risk research continues to be important for practitioners interested in identifying and treating women who are experiencing perimenopause and menopause. Behavioral health changes may focus on improved menopausal treatment regime compliance or the reduction in related health risk factors. McKnight et al. (1995) identified a group of premenopausal, menopausal, and postmenopausal women aged 48 to 52, to participate in a longitudinal study obtained from a general medical practice. The purpose of the study was to identify osteoporosis risk factors and a correlation between bone mineral density measurements. Risk factors for osteoporosis were prevalent in the focused age range. The statistical data did not produce a strong correlation of known risk factors to the prediction of osteoporosis. Lifestyle activities such as level of exercise, calcium consumption, tobacco use, and comparison of bone mineral density are poor predictors for the development of osteoporosis. Practitioners measuring women's bone density loss on a regular basis would give a more accurate individual osteoporosis risk factor. Educational efforts beginning at birth to prevent osteoporosis should be the focus for all general medical practitioners. Practitioners should approach screening and treating of menopausal women for osteoporosis risks with preventative measures (McKnight et al., 1995).

Complementary and alternative dietary regimes have received increased interest from women in the past few years in treating menopausal symptoms. Alternative dietary regimes have included soy products and botanical supplements, such as black cohosh and red clover. Research on naturally produced dietary hormones has influenced the

marketing of alternative or complementary therapies (McKee, & Warber, 2005). Geller et al. (2005) surveyed physicians', nurse practitioners', and nurses' knowledge, attitudes, and behavior with the use of alternative botanical dietary supplements (BDS) for women experiencing the menopausal phase. The research revealed that 63.9% of respondents had limited or no knowledge of BDS. Accepting this limited knowledge, eighty-five percent of the healthcare professionals requested additional training. Patients' increased knowledge and use of alternative therapy for relief of menopausal symptoms resulted in healthcare professionals requesting additional training (Geller et al., 2005). The demand on practitioners to expand their knowledge in alternative therapy for menopausal symptoms is a clear demonstration of women leading the way through the next reproductive phase. As a result, reevaluation of healthcare professionals' attitudes and changes in medical practices were noted by researchers (Gonyea, 1998).

Diet, exercise, medication, and interventions have surrounded studies focusing on the best treatment in alleviating symptoms and assisting women through the menopausal phase of life. Healthcare providers should take an active role in monitoring cardiovascular and related risk factors of menopausal women. Individual health screenings, in addition to surveying risk factors, can improve the treatment of osteoporosis. Careful evaluation of hormone replacement therapy for eligible women should also be considered (McKnight et al., 1995). Geller et al. (2005) noted that communication between menopausal women and their physicians is critical to achieve a successful treatment plan during menopause.

Exercise Programs

A different approach to assisting women through the experiences of perimenopause, menopause, and related health issues focused on exercise programs that enhanced quality of life. Menopausal women experience a greater risk for heart disease and osteoporosis. Routine exercise program results have shown improved cardiac and bone density measurements of women, which result in an enhanced physical condition (Jeng, Yang, Chang, & Tsao, 2004).

The purpose of the study conducted by Jeng et al. (2004) was to determine how physical and psychological changes with daily exercise by menopausal Taiwanese women would be perceived. Specific criteria were chosen which utilized purposeful sampling. There were 12 women who participated in the sample research with an average age of 54 years. The research investigator audio recorded information from the participants face-to-face. The interviewer used techniques that included open-ended questions, redirection, clarification, and validating information. Each interview session was held to about one hour in length. A second interview session followed 2 months later and initiated adjustments to questions according to qualitative data analysis. Data analyzed verbal, (including tone of voice), and non-verbal body cues. Careful data analysis revealed that the Taiwanese women recognized menopause as a time of health crisis. The women's perceptions of having power over their mind and body gave them continued reason to exercise daily. Initial pain with daily exercise was endured due to the beneficial outcomes that were experienced. Participants' choice of time, place, and method of exercise gave them empowerment and control. The success of adult learning programs supports the participants' involvement in choosing the time they spent to create

a meaningful program (Draves, 1997). The 12 women expressed a positive holistic benefit from daily exercise. Exercise programs that approach the holistic individual reported enhanced physical fitness and improved psychological health that included a higher self-esteem. Women reported regular exercise routines helped them face menopause with a positive attitude (Jeng et al., 2004).

Villaverde-Guteirrez et al. (2005) completed an experimental program designed to focus on therapeutic physical exercise which included psychological health. The study focused on sedentary menopausal women to improve physiological and psychosocial health. A second objective was to alleviate menopausal symptoms and improve women's quality of life. The participants met twice a week for one year with a physiotherapist and nurse. The exercises included a combination of strength training, relaxation, and cardiovascular. Each exercise session was enhanced by music and lighting, which is of notable importance to the adult learner (Draves, 1997). Individualization of each woman's physical abilities was important to the adult participants' self-image. Villaverde-Gutierrez et al. (2005) noted that the research of structured exercise programs that focus on psychological health improved the quality of life and well-being of the women who completed the program. Participants that met for the 12-month exercise program reported improvement in menopausal symptoms (Villaverde-Guteirrez, Araujo, Cruz, Roa, Barbosa, & Ruiz-Villaverde, 2005).

A study completed by Dr. McKee and Dr. Warber examined menopausal women through a holistic approach. Diet, exercise, psychosocial, and alternative therapies were studied in a literature review. McKee & Warber, (2005) noted women who participated in routine exercise and breathing relaxation techniques have reported fewer vasomotor

symptoms and improved quality of life. Examination of the effect that these relaxation techniques have on women experiencing hot flashes was studied. Women who experienced more than six hot flashes in one day were monitored while participating in a relaxation group session. The groups that received relaxation interventions had as much as a 90% decrease in reports of hot flashes. Treating menopause as a natural approach through patient education can provide women alternative methods to help alleviate symptoms. Physicians can assist patients by encouraging healthier life styles with alternative treatment responses to vasomotor symptoms (McKee & Warber, 2005).

Exercise programs for menopausal women have been found to be beneficial. Cardiac disease and osteoporosis are known related health risks for women in mid-life and exercise programs have statistically shown physical improvement. Women report that participating in programs that bring them together socially with other women will attain a positive improvement in quality of life. Physicians and nurses who offer routine exercise programs add a valuable improvement to the well-being of menopausal women.

Psycho-Educational Programs

The best practice findings through the literature review noted that multiple educational intervention programs optimize women's quality of life. Multiple educational programs attempt to best understand perimenopause, menopause, and related health issues through physiological and psychosocial interventions (Towey et al., 2006).

Rotem et al. (2005) enrolled women in a psycho-educational program that met for 10 weekly 2-hour sessions. The purpose of the study was to provide a psycho-educational program with defined instruction by nursing professionals. A second purpose was to determine if participant's relationship between severity of menopausal symptoms and

perceived attitudes of symptoms were affected by the psycho-educational program. The researchers coordinated the group process beginning with an introduction and overview of what the program expectations entailed. The first hour of every session was devoted to each participant sharing life experiences. Lecture and activities filled the second hour of the program (Rotem et al., 2005). Developing a professional group process included a feedback summation as a segment of the last weekly meeting. Women involved in a systematic psycho-educational program reported a significant reduction of perceived severity of menopausal symptoms and improved quality of life. The 3-month completion survey compared to the pre-participation survey indicates participants achieved more positive attitudes towards menopause after the completion of the program. These results are drawn from comparisons of both the baseline surveys and from the control group (Rotem et al., 2005)

Education

Upon reviewing the literature, it was noted that an increased need for women's educational programs assisting in the transitional phase of perimenopause, menopause, and related health issues gives way to future implications. Women seek knowledge about the menopausal phase of mid-life before reaching the perimenopausal phase. Women report wanting reliable sources of information rather than conflicting messages (Alfred et al., 2006). Pamela Buxton-Blake (2002), a nursing professor at Humboldt State University in Arcata, California, stressed the importance of using traditional and non-traditional menopausal treatment options. It was concluded that the nursing curricula should focus on individualized, non-judgmental support to those women. Healthcare providers should offer continuing educational programs that support women who choose

alternative perimenopause, menopause, and related health issues options. Related health issues, such as cardiovascular diseases and osteoporosis, are closely associated with the mid-life changes women experience. Education and informative communication of risk factors by primary healthcare professionals were noted as being underreported (Schonberg & Wee, 2005).

Domm, Parker, Reed, German, and Eisenberg (2000) completed a study of the ability of women to obtain educational information regarding menopause. The availability of menopausal information and perceived individual knowledge were assessed. Women's race and level of education correlated significantly with access to information. Menopausal women's knowledge improved with preventative treatment educational information that included hormone replacement therapy and health related risks. Women surveyed revealed minimal knowledge of the consequences of hormone replacement therapy (HRT). Along with the decreased knowledge of consequences, the women rated a lower importance for adverse impact of HRT side affects. Perceived health related risks of cardiovascular disease and osteoporosis were underreported by menopausal women. The ability to obtain menopausal information was affected by level of education and race. Women with various levels of education reported preferred delivery of educational information differently. Women with a higher level of education preferred pamphlets and a more passive approach to receiving educational information. An interactive group discussion method was preferred by different cultures and women with lower levels of education. Domm et al. (2000) summarized that inaccessible menopausal education was underestimated. There was a clear disparity in educational delivery to menopausal women of lower educational levels and difference in race. The

importance of the delivery method of menopausal education should be considered by healthcare providers and educators (Domm et al., 2000).

Alfred et al. (2006) gained insight concerning women's differing attitudes of perception, ideas, and influential management of menopause through research. A focus group noted that menopause was viewed as a natural life process and individual women voiced a strong desire to manage their own menopause. Women reported the need for independent research of menopause from reliable resources. A unified expression by participants reflected menopause negatively from a sociocultural issue. Identification from the focus groups noted the need for readily available information from healthcare providers that incorporated life applicable, self management of menopause and encompassed real life family issues. The participants expressed uncertainty of pharmaceutical motivation to healthcare providers and resorted to less reliable menopause sources for information such as magazines, newspapers, and television. Few participants were aware of reliable web sites for data retrieval. Participants voiced concern with the physicians' lack of appointment time given to discuss all issues. The poor communication and interaction with healthcare providers has lead to missed opportunities for open discussion of many health concerns that effect women during menopause. This study reinforces previous research that conflicting information in the management of menopause exists today. Healthcare providers and their patients experiencing the menopausal phase of life lack educational information. Expanding educational delivery systems to better support women's ability to make personal decisions through the menopausal phase is a strong future necessity.

Liao and Hunter (1998) completed research to evaluate intervening health educational sessions to premenopausal women as a preventative tool to manage menopause. The researcher's intent was to increase premenopausal women's knowledge of the menopausal phase through health education interventions. Women equipped with knowledge will report fewer negative menopausal effects and symptoms during menopause. The lack of available educational intervention and resources provide evidence that women's symptoms, experiences, and beliefs of menopause are at risk of negative influence. The research included a prepared group and a control group surveyed by pre-tests, post-tests, and follow-up surveys. Assessment of the participants' knowledge was followed at 3 months and 15 months from the initial health education sessions. The prepared group participated in two 90-minute health education sessions. The health education included presentations, discussion groups, and informational packets. A significant increase in knowledge was noted with the prepared group post-test and follow-up data collection. A decrease in negative beliefs and attitudes about menopause were reported by the prepared group after the intervention and were sustained in the follow-up contact interview. Liao and Hunter (1998) surmised premenopausal women, informed with health education interventions, will be better equipped to handle the menopausal life phase.

Hunter and O'Dea (1999) completed a 5-year follow-up study of the premenopausal women participants in the Liao and Hunter (1998) research. The prepared group evaluation scores assessing knowledge of menopause was significantly higher than the control group. The control group reported a higher use of hormone replacement therapy and complaints of menopausal symptoms. The overall evaluation of the prepared

group's knowledge, attitude, and symptoms related to menopause documented a significant difference compared to the control group. Hunter and O'Dea (1999) implicated that health education intervention for premenopausal women might contribute to a more positive and prepared menopausal experience.

Organizational Resources

Many organizations have formed to meet the needs of women experiencing perimenopause, menopause, and related health issues. The American Menopause Foundation President, Marie Lugano, has recognized that the thousands of baby boomer women over the age of 50 are a "goldmine of well-informed, discriminating consumers" (Milano, 2001, p. 136). The non-profit organization has been successful in going into communities and offering brown bag educational informational luncheons. The goals of educational sessions are to equip women with knowledge of perimenopause, menopause, and related health issues, as well as, knowledge of and encouragement to seek individualized treatment from their healthcare providers. In addition to educational materials, the American Menopause Foundation can provide advocacy for women (Milano, 2001). A second network agency that women can turn to for education and informational support during the menopausal mid-life phase is the National Program on Women and Aging. The center focuses attention on aspects that face mid-life women, such as menopause, and promotes change through community education and policy analysis to improve lives (National Program on Women and Aging, 2006). Research, education, and advocacy are the mission of the Older Women's League (OWL), a non-profit, non-partisan organization. OWL is another national advocacy organization for women over age 40 in the U.S. (Older Women's League, 2006). The National Women's

Health Information Center offers services from the Office on Women's Health and the United States Department of Health and Human Services. Educational information for women and healthcare professionals providing current resources has made the National Women's Health Information Center valuable. Educational information supporting osteoporosis and cardiovascular disease can be found through the National Osteoporosis Foundation and the American Heart Association. The National Osteoporosis Foundation's mission is to promote prevention, maintain bone health, and continue research to find a cure for osteoporosis disease (National Osteoporosis Foundation, 2006). The American Heart Association has become a nationally known organization that developed a branch devoted to women's health (American Heart Association, 2006). Today menopausal women have a profound voice that is being promoted through well organized and highly visible organizations. The elevated caliber of nationally founded organizations focuses research on health promotion and disease prevention for future educational knowledge. Women experiencing perimenopause, menopause, and related health issues will benefit from the educational programs.

Summary

Historically, society has viewed menopausal changes as loss, illness, or a regression in women's lives (Gannon & Stevens, 1998). Scientists across disciplines agree that the complexity of the menopausal phase is a summation of life experiences and culture (Shute, 2002). Healthcare educators and the media contribute to the perceptual management and treatment of menopausal women (Gannon, & Stevens, 1998). Women's attitudes, whether negative or positive, stem from their view of menopause as a medical issue, a natural life change, or a combination.

The summation of research supports the importance that menopausal life changes be treated with a holistic approach. A team approach to understanding menopause should include people from multiple disciplines such as psychology, sociology, education, and medicine. Physiological changes, psychosocial influences, and culture together influence how women experience perimenopause, menopause, and related health issues. There are no easy remedies for the relief of menopausal symptoms. Every woman's life is unique, and her life experience is an accumulation of internal and external energies that come from self, family, and society. Adult educational programs should include participant's life experiences, keeping in mind the instructor is a catalyst to adult learning programs (Draves, 1997). No one program can offer relief or benefits to every participant. Women experiencing perimenopause, menopause, and related health issues have found benefits in participating in a variety of programs. Programs to ease menopausal symptoms have included knowledge to improve awareness, treatment options, and life style behaviors. Through studies, researchers have identified the need for healthcare providers to widen their knowledge base to include complementary and alternative treatment plans for perimenopause, menopause, and related health issues. Perimenopausal and menopausal women will continue to shape the delivery system of health education and knowledge for change in the 21st century. Communication among physicians, nurse practitioners, and nurses must continue to improve to better serve menopausal women through many complex changes. Communication must be enhanced by increased time allocated for each individual woman while visiting her healthcare provider. Demands for more organized, educational sessions have been identified in the research. The focus should include choices of structured exercise programs and psycho-educational sessions that include

physiological and psychological health promotion. Hunter and O'Dea (1999) conclude that a routine health education intervention will reduce the menopausal stigma experienced today.

Chapter 3

METHODOLOGY

The purpose of this study was to determine if women's knowledge of perimenopause, menopause, and related health issues increased after participation in an educational workshop. The research objectives were as follows: 1. To determine if there was an increase in participants' knowledge of physiological and psychological changes, often experienced during perimenopause, menopause, and related health issues, after participating in an educational workshop. 2. To determine, 3-months after attending an educational workshop, if there was an increase in participants' knowledge of treatment options to manage perimenopause, menopause, and related health issues. 3. To determine, 3-months after attending an educational workshop, if participants' made any behavioral health changes after participating in an educational workshop.

Research Design

A quasi-experimental pre-test and post-test design with purposive sampling was used at the perimenopausal, menopausal, and related health issues educational workshop. The educational workshops were offered at 2 locations within the Midwestern Illinois county by the County Health Department. Times and locations differed to enhance participant's ability to attend an educational workshop. A local female physician gave an overview presentation of perimenopause, menopause, and related health issues. A second speaker, a massage therapist, discussed complementary and alternative therapy treatments.

Participants completed a demographic questionnaire, a pre-test, a post-test, and a 3-month follow-up telephone survey. During a 3-month follow-up telephone survey,

women responded with a yes or no regarding any learned treatment options to manage perimenopause, menopause, and related health issues. Secondly, participants also reported by a yes or no, during the 3-month follow-up telephone survey, any behavioral health changes they made from attending the educational workshop.

Sample

Women, ages 40 to 60 years old, were recruited to attend the perimenopausal, menopausal, and related health issues educational workshop in a Midwestern rural community. Advertising included articles discussing the educational event in the local newspaper. Flyers were distributed throughout the county, by the publicity team, to physicians' offices, local churches, area grocery stores, local banks, libraries, women's salons, local manufactures, schools, and local radio. Recruiting the cross-sectional age range from 40 to 60 provided a sample of women experiencing various phases of perimenopause, menopause, and related health issues. Participation in the education workshop was voluntary and required a $15.00 registration fee to cover the meal provided. The registration fee may have been a barrier for potential participants. This study targeted a purposive sample group of 300 women from a Midwestern county and surrounding area. There were 221 women who participated in the perimenopausal, menopausal, and related health issues educational workshop.

Instrumentation

The data collection instrumentation was developed, following Illinois Department of Public Health Grant criteria, specifically for the county educational workshop. The instruments included a demographics questionnaire (Appendix A), a pre-test and post-test (Appendices B and C), and a 3-month follow-up telephone survey (Appendix D).

Demographic characteristics included age, race, ethnicity, employment status, educational status, and annual household income. The pre-test and post-test instrumentation measured women's knowledge of perimenopause, menopause, and related health issues before and after the educational workshop. The pre-test and post-test was made up of 14 multiple choice questions. Each correct multiple choice answer circled was scored as one point for a possible score of 25 points (Appendix E). The 3-month follow-up telephone surveyor asked 2 questions: 1. At the educational session did you learn different treatment options to manage menopause? 2. Did you make any behavioral health changes since attending the session?

Validity and Reliability

Criterion validity was established by the educational program content correlating with the pre-test and post-test questionnaire. The Illinois Department of Public Health grant outlined the required content that was used in the educational workshop. The Illinois Department of Public Health grant required the use of standardized demographics questionnaire, pre-test, post-test, and 3-month follow-up telephone surveys.

Procedure for Data Collection

The study was conducted by the County Health Department and was made possible by a state Department of Public Health women's grant. Participants registered by telephone or postal registration forms to a County Health Department employee. Participant registration information was kept confidential. One educational workshop was offered at a local country club at 9:00 a.m. A second educational workshop was offered at a second local country club at 6:30 pm. The multiple sessions gave participants two opportunities to attend. Participants were seated at tables in groups of eight or more.

There were no seating restrictions; therefore, the women attending were allowed to sit with friends. Each table was hosted by a professional staff member of the County Health Department. The responsibility of the professional staff was to distribute and collect the data forms. The demographic information questionnaire and pre-test was distributed and collected before the educational session began. Participants were served a meal and ate while the first speaker presented. A local female physician gave a 45-minute Power Point presentation covering an overview of perimenopause, menopause, and related health issues. Healthy behavior interventions through diet, exercise, and psychosocial well-being were promoted. In both sessions, a second presenter offered information regarding complementary and alternative therapy treatment of the menopausal phase. Both presenters offered optional lifelong health choices and psychosocial interventions, along with a question-and-answer session. The post-test was distributed and collected after the educational workshop. The pre-test and post-test were matched by participant's last four digits of their phone numbers. The entire program lasted 3 hours.

Data Analysis

Descriptive statistical analysis was conducted by using SPSS (version 14.0 for Windows; SPSS, Inc.). The summation of the participant's demographics was presented in graph form. Age, race, ethnicity, employment, education, and household income were analyzed and described by nominal frequencies and percents. The path analysis of the sample demographics provided a profile of participants. The pre-test and post-test were analyzed by a paired *t*-test ($p<.05$). The purpose of the paired *t*-test was to determine the difference in participants' knowledge, before and after the educational workshop. The purpose of the 3-month follow-up telephone survey analyzed the frequency with which

participant's reported learned options to manage their menopause and behavioral health changes.

Chapter 4

RESULTS AND DISCUSSION

The purpose of this study was to determine if women's knowledge of perimenopause, menopause, and related health issues increased after participation in an educational workshop. The research was guided by three objectives to investigate women's knowledge before and after attending an educational workshop. The research objectives were:

1. To determine if there was an increase in participants' knowledge of physiological and psychological changes, often experienced during perimenopause, menopause, and related health issues, by attending an educational workshop.
2. To determine, 3-months after attending an educational workshop, if there was an increase in participants' knowledge of treatment options to manage perimenopause, menopause, and related health issues.
3. To determine, 3-months after attending an educational workshop, if participants' made any behavioral health changes.

Participant Demographics

Descriptive analysis of the data was statistically compiled by using SPSS (version 14.0 for Windows; SPSS, Inc.). The purposive sampling was comprised of voluntary female participants residing in a Midwestern Illinois rural community. The sample included 221 participants attending the perimenopausal, menopausal, and related health issues educational workshops. Of those attending, 212 women completed the demographics survey and 169 completed the pre-test and post-test that was used in the

data analysis. Only nine participants had incomplete or partially completed demographics. The researcher was unable to match 42 pre-test and post-test surveys due to missing participants identifying information.

The sample target of 300 women yielded a 74% recruitment rate (n=221). Age, race, ethnicity, employment, education, and household income were analyzed by nominal scores. The demographic race of attendees included 97% Caucasians (n=206) participants (See Figure 1). For age, 170 participants ranged between 45 to 64 years old (See Figure 2). Participants in attendance between the ages of 25 to 65 represented 94%, which included the targeted sample of the study. The demographic survey indicated that 170 (77%) of the 221 participants were employed (See Figure 3). For participant's educational level, 78% had some type of formal education beyond high school (See Figure 4). For income, 9% did not include household income data and 75% had a household income of greater than $35,000 (See Figure 5). The researcher noted the group demographics in this study closely relate to the characteristics of Liao and Hunter (1998) participants. As was true for this study, the majority of Liao and Hunter's participants were married, Caucasian, and employed.

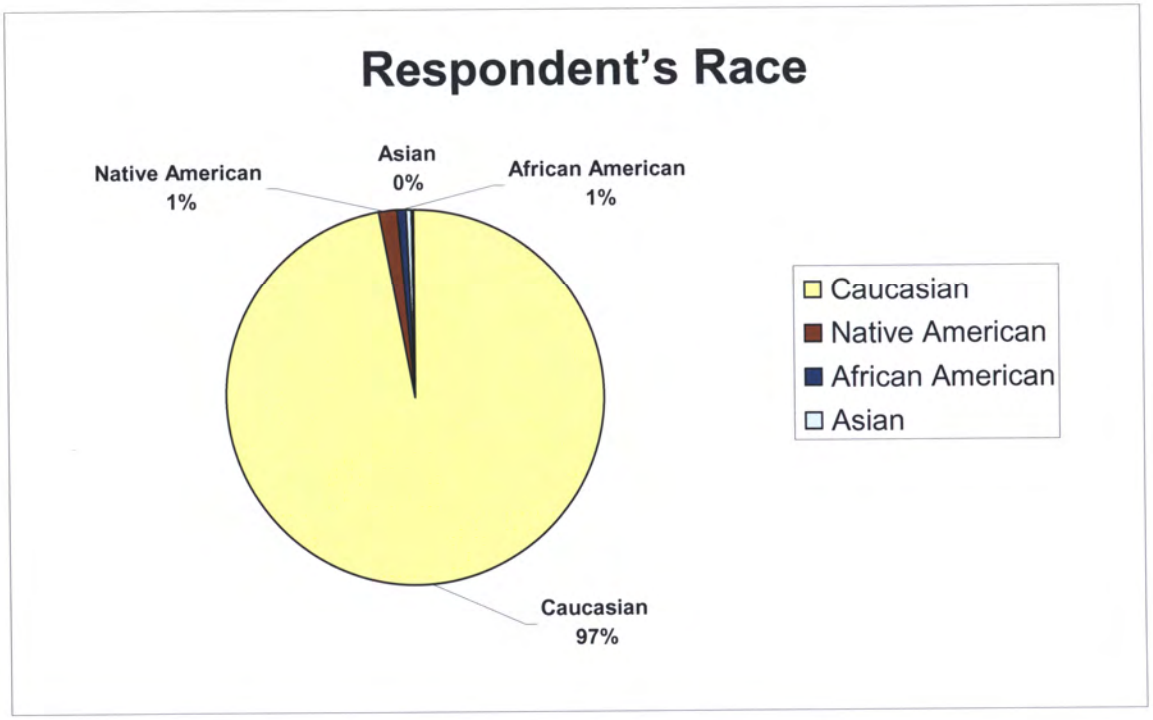

Figure 1 Demographic race characteristics

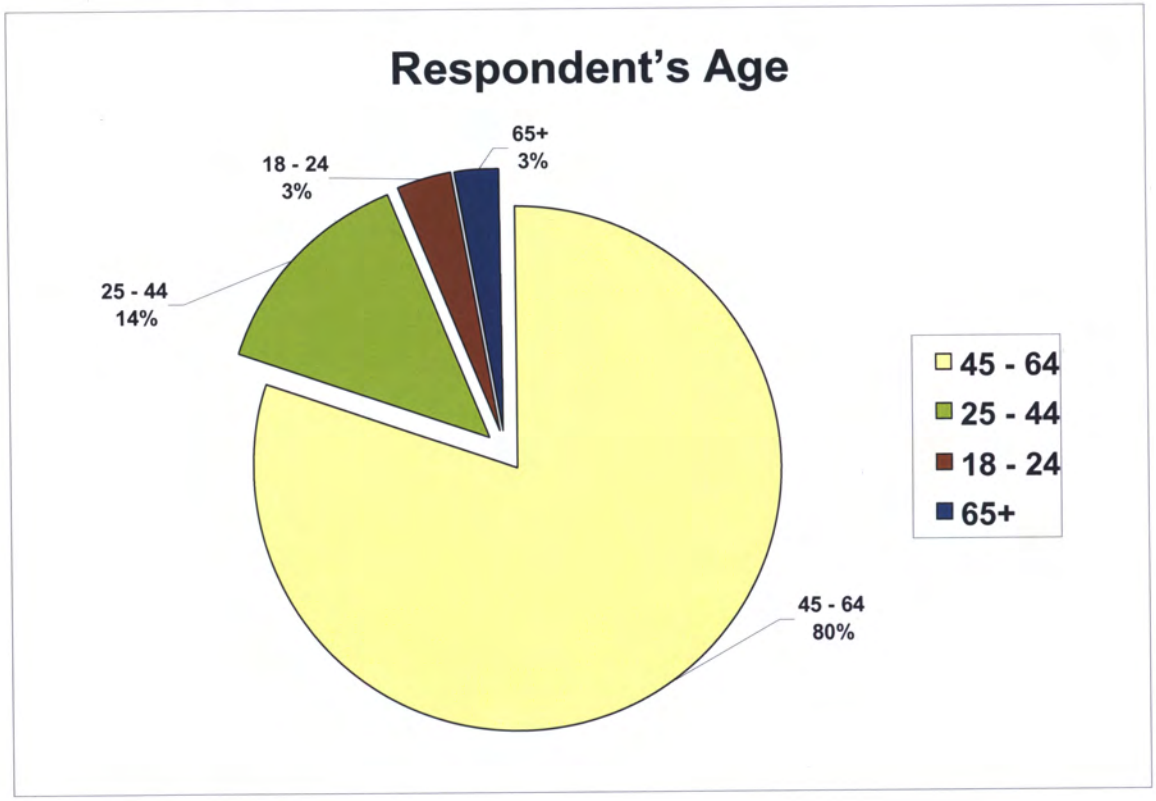

Figure 2 Demographic age characteristics

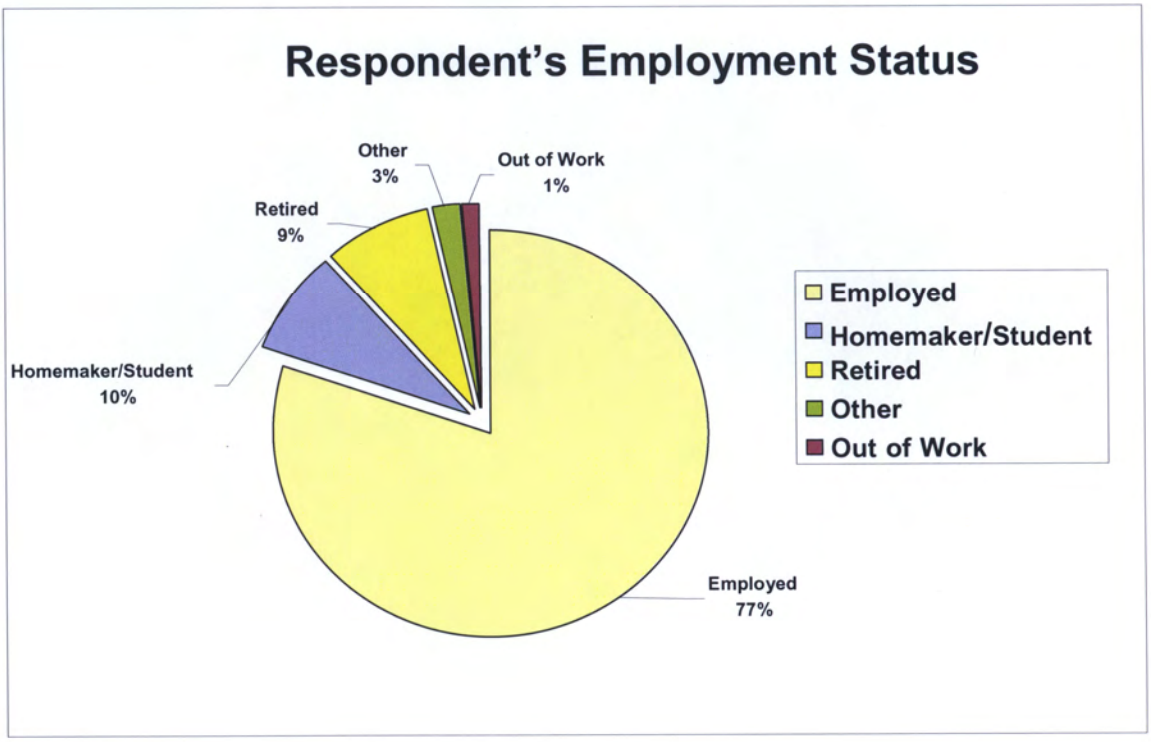

Figure 3 Demographic employment characteristics

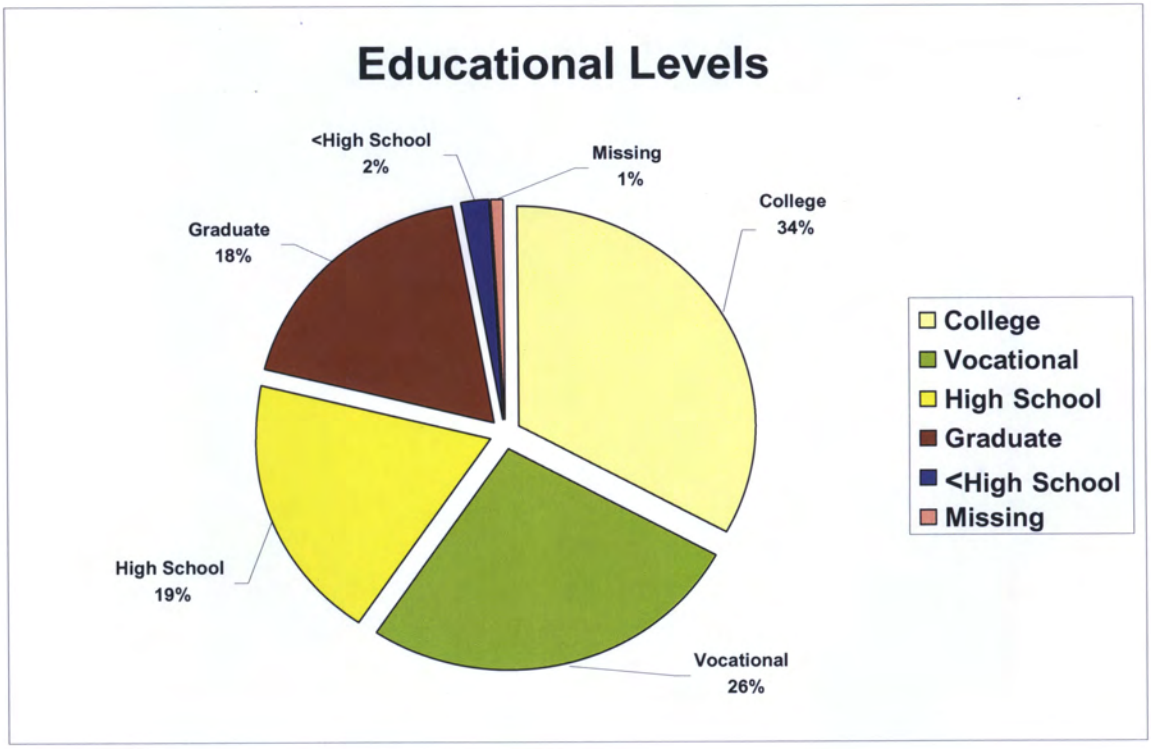

Figure 4 Demographic educational levels

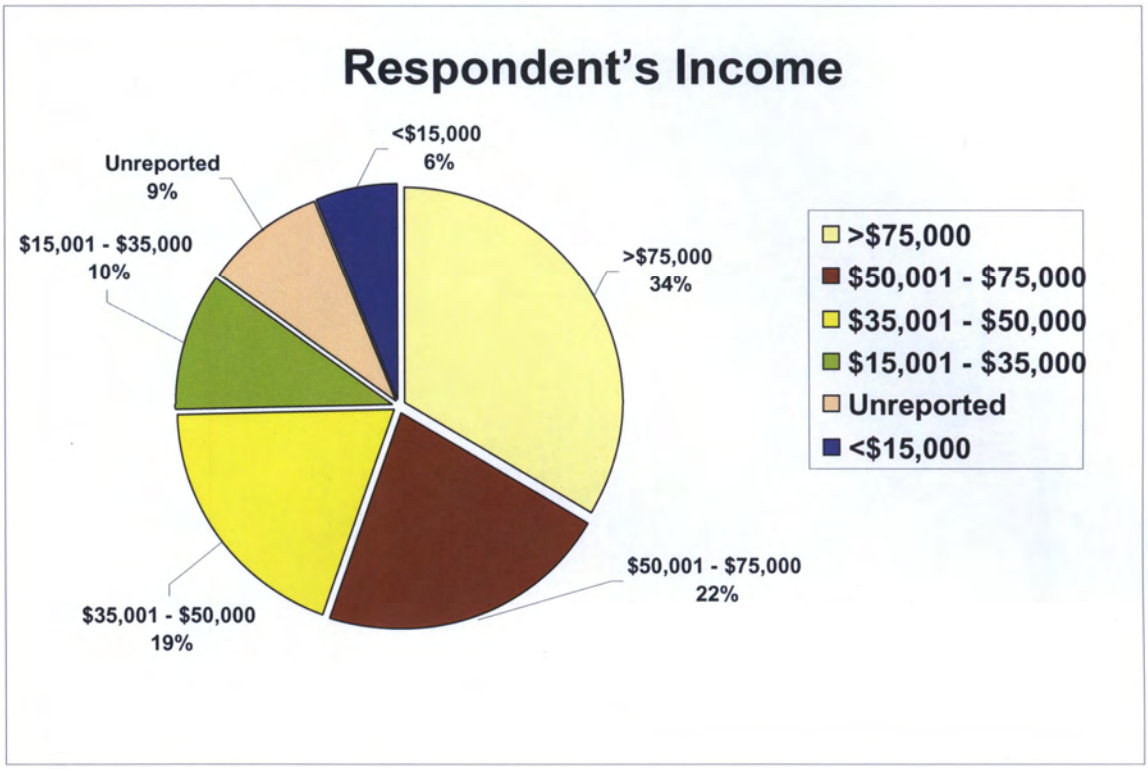

Figure 5 Demographic income characteristics

Objective 1- Participant's Knowledge

The first objective was addressed by using the pre-test and post-test survey to determine if an increase in participants' knowledge of physiological and psychological changes occurred. It was hypothesized that perimenopausal and menopausal women would increase their knowledge of physiological and psychological symptoms during perimenopause and menopause, after attending an educational session. The pre-tests and post-tests were analyzed by paired *t*-tests with $\alpha = .05$. There were 221 pre-tests and post-tests distributed. However, only 169 could be analyzed (76%). Participants scored a mean of 17.9 ($\pm$2.9) on the pre-test and a mean of 19.8 ($\pm$1.9) on the post-test. This was a significant increase in score (t (168) =9.11, p=.000). Geller et al. (2005) noted that, following the Women's Health Initiative (WHI), there was an increase in complementary and alternative treatment interest. Approximately 70% of women experiencing the menopausal phase of life are seeking knowledge to help manage menopause (Geller et al., 2005). The large participant interest in the current study was similar to the participant levels in Geller's study. Similar to the current study, Liao and Hunter (1998) noted that participating in an educational workshop raises women's awareness. Women were more likely to initiate discussions of menopause to significantly affect attitude changes after completing a questionnaire. Towey et al. (2006) noted that perceived attitudes of severity of menopausal symptoms are positively impacted through structured psycho-educational programs. Increase in women's knowledge of physiological and psychological changes often experienced during perimenopause, menopause, and related health issues are supported through past and current research.

Objective 2- Learned Treatment Options

The second objective addressed during the 3-month follow-up telephone survey was to determine if there was an increase in participants' knowledge of treatment options to manage perimenopause, menopause, and related health issues. It was hypothesized that perimenopausal and menopausal women would increase their knowledge of treatment options to manage perimenopause, menopause, and related health issues after attending an educational session. The current 3-month follow-up telephone survey was completed by 157 of the original attendees who participated in the perimenopause, menopause, and related health issues educational workshop. A retention rate of 71% of participants was surveyed at the 3-month follow-up telephone interview.

There were 142 of the 157 (90%) women who reported learning treatment options to assist with perimenopause, menopause, and related health issues. Eight women reported during the telephone survey that they gained knowledge of where to locate information regarding menopause because of attending the workshop. Ninety percent of the women reported increasing their knowledge of treatment options as a result of attending a menopausal educational session. Participating in educational programs that include treatment options to manage perimenopause, menopause, and related health issues increase women's options.

McKee et al. (2005) integrated therapies for menopause and concluded that giving women treatment options through education contributed to a healthier lifestyle. Hunter's (1993) research supports that menopausal educational interventions that include treatment options benefit women's personal health (McKee et al., 2005).

Objective 3- Behavioral Health Changes

A third objective was to determine if participants made any behavioral health changes after participating in an educational workshop. It was hypothesized that participants would identify behavioral health changes during a 3-month follow-up telephone survey after attending the educational workshop. Of those responding to the 3-month follow-up telephone survey, 67 women reported that they had made some form of behavioral change since attending the educational session. The current study results reflect positive outcomes similar to previous research regarding women's participation in educational workshops.

Although the second question ("did participants make any behavioral health changes after participating in the educational workshop") required a yes or no response, some women chose to express further opinions. Women voluntarily reported several behavioral health changes which included: 1. Eight women had spoken to their physician regarding menopausal symptoms; 2. Three women reported decreasing their hormones; 3. Three women reported taking hormones or using vaginal creams; 4. Twenty-six women reported increasing or beginning an exercise program; 5. Twenty-one women reported attempts to eat healthier; 6. Three women reported beginning a vitamin and calcium supplement routine; 7. One woman reported gaining knowledge of osteoporosis and bone health from attending the workshop; 8. One woman had completed a physical and colonoscopy; 9. Four women had attempted to make unspecified behavioral health changes.

Consistent with the current study, Liao and Hunter's (1998) research noted that women who participated in an educational program reported behavioral changes during a

follow-up survey. Reported changes in decreased smoking, increased exercise, and decreased hormone replacement therapy were statistically significant (Liao and Hunter 1998). Menopausal women who participate in educational workshops can gain knowledge to assist in positive behavioral health changes.

Rotem et al.'s (2005) study on a psycho-educational program found women participants, at a 3-month follow-up survey, expressed increased confidence in managing their menopause. A model by Petty and Wegener (1998) suggests difficulty in separating the cognitive and emotional process women experience during perimenopause and menopause (Rotem et al., 2005). Therefore, participation in psycho-educational programs can have an affect on women's attitudes more positively toward the menopausal phase.

Women reported feeling positive and confident in their well-being as a result of attending the educational workshop. The current study's findings are consistent with the research of Hunter & O'Dea (1999), Liao & Hunter (1998), Jeng et al., (2004), and Towey et al., (2006). The participant's demographic characteristics in the current study were similar to samples in prior research. Similarly, research supports women participants, in educational workshops, verbalize a decreased negative attitude and feelings of isolation toward the menopausal phase. Buxton-Blake (2002) reported that women are more optimistic after increasing their knowledge, alleviating unknowns, and sharing treatment options of the menopausal phase though educational workshops. The current research results of 67 women reporting some form of change in health behaviors support the need for more perimenopausal and menopausal educational workshops. It is concluded that women coming together for menopausal educational workshops found support and reduction in anxiety as they shared similar experiences.

Summary

The current research validates previous recommendations that increased opportunities for educational workshops are needed. The fact that 221 women, from a Midwestern county, participated in a one-time educational workshop indicates the perceived need by women to learn more regarding menopause. Evaluation of the data of women participating in a menopausal education workshop provided evidence of increased knowledge of perimenopause, menopause, and related health issues. Women also achieved an increased knowledge of treatment options to manage the mid-life menopausal phase. Finally, the study concluded that women reported implementing behavioral health changes after participating in the educational workshop.

Even though the educational workshop was heavily attended and achieved positive results, there are unanswered questions regarding a broader scope of study to include lower income and educational levels. The current study was limited in scope and further research should be conducted to include a larger cross section of participants.

Chapter 5

CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this study was to determine if women's knowledge of perimenopause, menopause, and related health issues increased after participation in an educational workshop. Participant's knowledge of physiological and psychological changes increased, as evidenced by the significant mean score difference between the pre-test and post-test. The 3-month follow-up telephone survey resulted in 90% reported learned treatment options and 43% making some form of behavioral health changes as a result of attending the menopausal educational workshop. The 221 women involved in the workshop reflect a strong interest surrounding mid-life phases in this rural Midwestern county.

Conclusions and Implications

The population growth has yielded the largest perimenopausal and menopausal group of women that healthcare providers have ever experienced. The identified need for education on perimenopause, menopause, and related health issues is warranted by the population growth of women experiencing the natural cessation of reproductive changes. Voluntary participation by the 221 women involved in the educational workshop reflects a strong interest surrounding mid-life phases in this Midwestern Illinois county. The large attendance at the current educational workshop reinforced the researcher's findings that menopausal women are seeking to increase their knowledge to manage the perimenopausal and menopausal phase. The author's results showed that women can increase their knowledge of physiological changes such as cardiovascular disease,

osteoporosis, vasomotor (hot flashes), and psychosocial stressors as observed in the participants' responses who attended the educational workshop.

The study also showed that women had increased their knowledge of treatment options to manage the menopausal phase. The results of 67 women reported making health behavior changes were positive steps in understanding the need and impact of perimenopause and menopause. During the 3-month follow-up telephone survey, the researcher noted the repeated comments of participants that requested the educational workshop to be an annual event. The results of the positive, upbeat responses reflected that women had enjoyed gathering and sharing with other women who were experiencing similar menopausal symptoms. The results of this study reflected findings of previous research as similar to the current educational workshop responses.

The physician who presented at the educational workshop emphasized the importance of menopausal women discussing medical advice with their healthcare provider to determine the best treatment options. Dialogue between healthcare providers and women is needed during the perimenopausal and menopausal phases. The educational workshop also included a discussion of alternative and complementary treatment options that resulted in positive comments from the participants. The research supported that diverse treatment options should be individualized for each woman experiencing perimenopause and menopause.

A summary of comments from the program evaluation revealed 14 women enjoyed meeting with other women who were experiencing menopause. One-hundred and twenty-two women commented, on the program evaluation, how appreciative they were to hear a physician speak and take time for questions and answers. Overwhelmingly,

women verbalized appreciation of the workshop during the 3-month follow-up telephone survey and looked forward to future opportunities for menopausal educational workshops. In addition, 43% of the participant's reported behavioral health changes as a result of the educational workshop.

The interest of perimenopause, menopause, and related health issues by women and research data support the need for increased opportunities of educational workshops. Knowledge deficits of complementary and alternative treatment options for menopause are observed among the healthcare providers. In turn, healthcare providers must expand their practices to include perimenopausal, menopausal, and related health issues through communication and educational workshops. Perimenopausal, menopausal, complementary, and alternative training should be incorporated in the medical and nursing school curriculum. Research reports that women are self-treating due to the lack of communication opportunities from their physicians. The self-treatment raises safety issues and need for educational guidance. Increased continuing educational credits for all healthcare providers will increase communication between physicians and patients. Healthcare professionals can bridge the gap to distribute educational material and information to women before they experience the mid-life phase. Exposing women to educational materials and questionnaires before perimenopause and menopause may raise their interest enough to initiate discussion with their physicians. The large mid-life groups of women are and will continue seeking treatment and information to focus on a holistic approach.

Recommendations for Future Studies

The limitations to this study included time restraints with a one-time educational presentation to participants. Participants were offered a one-time workshop in a Midwestern county. The voluntary purposive sample from a Midwestern county in Illinois limited the results of the study being generalized to the larger population of women.

Future educational workshops should include a broader cross section of educational and economic demographic sampling. Women of lower educational and income levels were not adequately reached. Results showed that 78% of the participant's had an educational level greater than a high school diploma. Also, more than 75% of the participants reported an income over $35,000. A $15.00 participation fee for a meal was charged, which could have been a deterrent to women's attendance at the educational workshop. Eliminating barriers by providing free educational workshops in easily accessible community sites could involve a greater number of women participants.

The demographic survey questions for ethnicity and educational level were confusing to the participants. Participants were to circle the category that best represented their response. Some participants circled more than one response to a) Hispanic or Latino, b) Not Hispanic or Latino, and c) Other for the ethnicity portion of the demographic sheet. The educational level choices also resulted in multiple responses by some participants. Directions on future surveys should clarify to circle only one choice. The workshops were held at country clubs, which could have been perceived barriers because of thoughts of prestige and status. A more diverse group of women could be

reached and enriched through future menopausal educational workshops in this Midwestern county.

Physicians, nurse practitioners, and nurses providing routine educational workshops can assist in increasing women's knowledge of perimenopause, menopause, and related health issues to improve quality of life through the mid-life phase. Reducing risk factors, opening up communication, and providing educational materials should begin before women reach the perimenopausal phase. Physicians, nurse practitioners, and nurses should incorporate discussion of diet, exercise, complementary and alternative treatment options, cardiovascular, and osteoporosis prevention information for women in their healthcare practices at each visit. Offering routine menopausal workshops to include group discussion can decrease the stigma and increase discussion between healthcare providers and their patients. Increasing women's knowledge of perimenopausal, menopausal, and related health issues will assist in symptom management through the mid-life phase. Educational workshops and opportunities treating women holistically will foster positive attitudes and healthier lifestyles.

Future educational curriculum should incorporate perimenopausal, menopausal, complementary, and alternative training in medical and nursing schools. An increase in funding for reimbursement and training opportunities for continuing education credits for all levels of healthcare providers should be explored. Future treatment of osteoporosis suggests routine bone density measurement research using ultrasound techniques. Exercise specialists could focus on including routine mid-life exercise programs for women. The exercise programs could address cardiovascular health, osteoporosis, and a holistic mind-body approach specifically for mid-life women. Future studies of the

effectiveness and safety of hormone replacement therapy should continue to clearly determine its use among women. Finally, the use of anti-depressants and the effects of women experiencing difficult menopausal symptoms should be explored.

Future studies of educational workshops should include choices of small group and psycho-educational interactions directed by healthcare providers. Including physiological and psychological health promotion in educational workshops will treat menopausal women in a holistic approach. Every woman's life is unique. Culture and experience is a life long process influenced by the individual, family, and society. Perimenopause, menopause, and related health issues require a variety of educational programs. Healthcare providers and women need to keep themselves apprised of the ever changing aspects of the mid-life phase.

References

Alfred, A., Esterman, A., Farmer, E., & Pilotto, L. (2006). Women's decision making at menopause. *Australian Family Physician, 35*(4), 270-272.

American Heart Association. (n.d.). *Mission of the American Heart Association.* Retrieved November 13, 2006 from http://www.americanheart.org/presenter.jhtml?identifier=10858.

American Menopause Foundation. (n.d.). *Education resources.* Retrieved from http://www.americanmenopause.org/index-2.htm.

Buxton-Blake, P. L. (2002). Menopausal treatment dilemma: Challenge for women and nurses. *Contemporary Nurse, 13,* 117-125.

Draves, W. A. (1997). *How to teach adults*. (2nd ed.). Manhattan, KS: The Learning Resources Network.

Domm, J. A., Parker, E. E., Reed, G. W., German, D. C., & Eisenberg, E. (2000). Factors affecting access to menopause information. *The North American Menopause Society, 7*(1), 62-67.

Gannon, L., & Stevens, J. (1998). Portraits of menopause in the mass media. *Women & Health, 27*(3), 1-15.

Geller, S. E., Studee, L., & Chandra, G. (2005). Knowledge, attitudes, and behaviors of healthcare providers for botanical and dietary supplement use for postmenopausal health. *The North American Menopause Society, 12*(1), 49-55.

Gonyea, J. G. (1998). Midlife and menopause: Uncharted territories for baby boomer women. *Generations, 1*, 87-89.

Guthrie, J. R., Dennerstein, L., Taffe, J. R., Lebert, P., & Burger, H. G. (2004). The menopausal transition: A 9-year prospective population-based study. The Melbourne women's midlife health project. *Climacteric, 7,* 375-389.

Hays, N. P., Bathalon, G. P., Roubenoff, R., McCrory, M. A., & Roberts, S. B. (2006). Eating behavior and weight change in healthy postmenopausal women: Results of a 4-year longitudinal study. *Journals of Gerontology, 61A*(6), 608-615.

Houck, J. A. (2005). The medicalization of menopause in America, 1897-2000: Mapping the terrain. In D. L. Kleinman, A. J. Kinchy & J. Handelsman (Ed.), *Controversies in Science and Technology (198-218).* Madison, WI: University of Wisconsin Press.

Hunter, M., & O'Dea, I. (1999). An evaluation of a health education intervention for mid-aged women: five year follow-up of effects upon knowledge, impact of menopause and health. *Patient Education and Counseling, 38*, 249-255.

Illinois Department of Public Health. (n.d.). *Women's health: Facts about menopause.* Retrieved on October 6, 2006, from http://www.idph.state.il.us/about/womenshealth/factsheets/meno.htm.

Illinois Department of Public Health. (n.d.). Office of women's health: Health status 2010. Retrieved December 3, 2006, from www.healthstatus2010.com/owh/what/OWH_FIPS_list.asp.

Jeng, C., Yang, S-H., Chang, P-C., & Tsao, L-I. (2004). Menopausal women: Perceiving continuous power through the experience of regular exercise. *Journal of Clinical Nursing, 13,* 447-454.

Kleinman, D. L., Kinchy, A. J., & Handelsman, J. (2005). Controversies in science and technology: From maize to menopause. Madison, WI: University of Wisconsin Press.

Liao, K. L. M., & Hunter, M. S. (1998). Preparation for menopause: Prospective evaluation of a health education intervention for mid-aged women. *Maturitas, 29,* 215-224.

Lock, M. (2005). Symptom reporting at the end of menstruation: Biological variation and cultural difference. In D. L. Kleinman, A. J. Kinchy & J. Handelsman (Eds.), *Controversies in Science and Technology (236-253).* Madison, WI: University of WI Press.

McKee, J., & Warber, S. L. (2005). Integrative therapies for menopause. *Southern Medical Journal, 98*(3), 319-326.

McKnight, A., Steele, K., Mills, K., Gilchrist, C., & Taggart, H. (1995). Bone mineral density in relation to medical and lifestyle risk factors for osteoporosis in premenopausal, menopausal and postmenopausal women in general practice. *British Journal of General Practice, 45*, 317-320.

Merriam-Webster Online Dictionary. (n.d.). *Online Search.* Retrieved December 02, 2006, from http://www.m-w.com/.

Milano, C. (2001). Carrying a torch for education. *Pharmaceutical Executive, 21*(6), 136-140.

National Center for Complementary and Alternative Medicine. (n.d.) *Get the facts.* Retrieved December 02, 2006, from http://nccam.nih.gov/health/whatiscam/.

National Osteoporosis Foundation. (n.d.) *Mission and goals.* Retrieved November 13, 2006, from http://www.nof.org/aboutnof/.

National Program on Women and Aging. (n.d.). *Meeting the challenges confronting women as they age.* Retrieved November 13, 2006, from http://iasp.brandeis.edu/womenandaging/mission.html.

National Women's Health Information Center. (n.d.). *Welcome to the national women's health information center.* Retrieved October 6, 2006, from http://www.4women.gov.

Older Women's League, The Voice of Midlife and Older Women. (n.d.) *About us.* Retrieved November 13, 2006, from http://www.owl-national.org/about/index.html.

Rotem, M., Kushnir, T., Levine, R., & Ehrenfeld, M. (2005). A psycho-educational program for improving women's attitudes and coping with menopause symptoms. *Journal of Obstetric, Gynecologic, & Neonatal Nursing Clinical Research, 34*(2), 233-240.

Schonberg, M. A., & Wee, C. C. (2005). Menopausal symptom management and prevention counseling after the women's health initiative among women seen in an internal medicine practice. *Journal of Women's Health, 14,* 507-514.

Seaman, B. (2005). The history of hormone replacement therapy: A timeline. In D. L. Kleinman, A. J. Kinchy & J. Handelsman (Eds.), *Controversies in Science and Technology (219-235).* Madison, WI: University of Wisconsin Press.

Shute, N. (2002). A world of differences. *U.S. News and World Report, 133*(19), 71.

Towey, M., Bundy, C., & Cordingley, L. (2006). Psychological and social interventions in the menopause. *Current Opinion in Obstetrics and Gynecology, 18,* 413-417.

U.S. Department of Health and Human Services (1995). *Menopause.* National Institutes of Health Publication No. 94-3886.

U.S. Department of Health and Human Services (2001). *Menopause: One woman's story, every woman's story; A resource for making healthy choices*. National Institutes of Health Publication No. 01-3886.

Villaverde-Gutierrez, C., Araujo, E., Cruz, F., Roa, J. M., Barbosa, W., & Ruiz-Villaverde, G. (2005). Quality of life of rural menopausal women in response to a customized exercise program. *Journal of Advanced Nursing, 54*(1), 11-19.

Wassertheil-Smoller, S. (2005). Postmenopausal hormones: An overview. In D. L. Kleinman, A. J. Kinchy & J. Handelsman (Ed.), *Controversies in Science and Technology (181-197).* Madison, WI: University of Wisconsin Press.

Appendix A

Participant Demographic Information Questionnaire

1. Please circle the appropriate category for your age.
   a) 18-24 years
   b) 25-44 years
   c) 45-64 years
   d) > = 65 years

2. Please circle your race.
   a) Asian
   b) American Indian or Alaskan Native
   c) Black or African American
   d) Native Hawaiian or Pacific Islander
   e) White
   f) Other

3. Please circle your ethnicity.
   a) Hispanic or Latino
   b) Not Hispanic or Latino
   c) Other

4. Please circle the category that best represents your employment status.
   a) Employed
   b) Out of Work
   c) Homemaker/Student
   d) Retired/Unable to Work
   e) Other

5. Please circle the category that best represents your educational level.
   a) < = High School
   b) High School Graduate
   c) Some College/Trade/Vocational School
   d) Trade/Vocational School Graduate
   e) College Graduate
   f) Graduate Degree
   g) Other

6. Please circle the category that represents your annual household income.
   a) < = $15,000
   b) $15,000 - $35,000
   c) $35,000 - $50,000
   d) $50,000 - $75,000
   e) > = $75,000

Other

THANK YOU!

Appendix B

Understanding Menopause

Pre-Test

Date: _____

1. Which of these can cause menopause?
   a) Surgery
   b) Chemotherapy
   c) Natural aging process
   d) Radiation treatment
   e) All of the above

2. Women produce testosterone?
   a) True
   b) False

3. Which symptoms are signs of perimenopause?
   (Circle all that apply)
   a) Irregular periods
   b) Vaginal dryness
   c) Hair loss
   d) Mood changes
   e) Loss of appetite
   f) Decrease in bladder control

4. What are some of the health problems that can arise from menopause?
   (Circle all that apply)
   a) Osteoporosis
   b) Heart Disease
   c) Alzheimer's
   d) Stroke
   e) Cancer

5. What factors can cause "thin bones", also known as Osteoporosis? (Circle all that apply)
   a) Low calcium intake
   b) Family history
   c) Low body weight
   d) Smoking
   e) Lack of exercise
   f) All of the above

6. What is the number one killer for American women?
   a) Alcohol abuse
   b) Cancer
   c) Heart disease
   d) Diabetes

7. What are some risk factors for women for heart disease? (Circle all that apply)
   a) High cholesterol
   b) High blood pressure
   c) Obesity
   d) Smoking
   e) Early menopause
   f) All of the above

8. If you are over age of 50 and are having irregular periods, there is no need to worry about pregnancy?
   a) True
   b) False

9. Once you get older, you do not have to worry about diet and exercise.
   a) True
   b) False

10. All women with perimenopause symptoms should be placed on hormone replacement therapy.
    a) True
    b) False

11. What are the two most common hormones that are replaced by hormone replacement therapy?
    a) Testosterone
    b) Estrogen
    c) Pheromones
    d) Progesterone

12. What are the long-term risks of hormone replacement therapy?
    a) Breast Cancer
    b) Endometrial cancer
    c) Blood clots
    d) Heart attack/stroke
    e) All of the above

13. Where can you find phytoestrogens or "natural" estrogens?
    a) Cereals
    b) Vegetables
    c) Beans
    d) Fruits
    e) Some herbs
    f) Chocolate

14. Estrogen is produced in the ovaries.
    f) True
    g) False

Enter last 4 digits of your telephone # _____

THANK YOU!

Appendix C

Understanding Menopause

Post-Test

Date: _____

13. Which of these can cause menopause?

    a) Surgery
    b) Chemotherapy
    c) Natural aging process
    d) Radiation treatment
    e) All of the above

14. Women produce testosterone?
    a) True
    b) False

15. Which symptoms are signs of perimenopause?
    (Circle all that apply)
    a) Irregular periods
    b) Vaginal dryness
    c) Hair loss
    d) Mood changes
    e) Loss of appetite
    f) Decrease in bladder control

16. What are some of the health problems that can arise from menopause?
    (Circle all that apply)
    a) Osteoporosis
    b) Heart Disease
    c) Alzheimer's
    d) Stroke
    e) Cancer

17. What factors can cause "thin bones", also known as Osteoporosis? (Circle all that apply)
    a) Low calcium intake
    b) Family history
    c) Low body weight
    d) Smoking
    e) Lack of exercise
    f) All of the above

18. What is the number one killer for American women?
    a) Alcohol abuse
    b) Cancer
    c) Heart disease
    d) Diabetes

19. What are some risk factors for women for heart disease? (Circle all that apply)
    a) High cholesterol
    b) High blood pressure
    c) Obesity
    d) Smoking
    e) Early menopause
    f) All of the above

20. If you are over age of 50 and are having irregular periods, there is no need to worry about pregnancy?
    a) True
    b) False

21. Once you get older, you do not have to worry about diet and exercise.
    a) True
    b) False

22. All women with perimenopause symptoms should be placed on hormone replacement therapy.
    a) True
    b) False

23. What are the two most common hormones that are replaced by hormone replacement therapy?
    a) Testosterone
    b) Estrogen
    c) Pheromones
    d) Progesterone

24. What are the long-term risks of hormone replacement therapy?
    a) Breast Cancer
    b) Endometrial cancer
    c) Blood clots
    d) Heart attack/stroke
    e) All of the above

25. Where can you find phytoestrogens or "natural" estrogens?
    a) Cereals
    b) Vegetables
    c) Beans
    d) Fruits
    e) Some herbs
    f) Chocolate

26. Estrogen is produced in the ovaries.
    a) True
    b) False

Enter last 4 digits of your telephone # _____

THANK YOU!

Appendix E

Understanding Menopause

Answer Key

Date: _____

1. Which of these can cause menopause?

   a) Surgery
   b) Chemotherapy
   c) Natural aging process
   d) Radiation treatment
   e) All of the above

2. Women produce testosterone?
   a) True
   b) False

3. Which symptoms are signs of perimenopause?
   (Circle all that apply)
   c) Irregular periods
   a) Vaginal dryness
   b) Hair loss
   c) Mood changes
   d) Loss of appetite
   e) Decrease in bladder control

4. What are some of the health problems that can arise from menopause?
   (Circle all that apply)
   f) Osteoporosis
   a) Heart Disease
   b) Alzheimer's
   c) Stroke
   d) Cancer

5. What factors can cause "thin bones", also known as Osteoporosis? (Circle all that apply)
   e) Low calcium intake
   a) Family history
   b) Low body weight
   c) Smoking
   d) Lack of exercise
   e) All of the above

6. What is the number one killer for American women?
   a) Alcohol abuse
   b) Cancer
   c) Heart disease
   d) Diabetes

7. What are some risk factors for women for heart disease? (Circle all that apply)
   a) High cholesterol
   b) High blood pressure
   c) Obesity
   d) Smoking
   e) Early menopause
   f) All of the above

8. If you are over age of 50 and are having irregular periods, there is no need to worry about pregnancy?
   g) True
   a) False

9. Once you get older, you do not have to worry about diet and exercise.
   b) True
   c) False

10. All women with perimenopause symptoms should be placed on hormone replacement therapy.
    a) True
    b) False

Appendix D

Menopause 3-Month Follow-up Survey Questions

Hi, this is _____ from _____ with a few questions about the Understanding Menopause session you attended on _____. I have just two questions that will help us track the success of the program.

1. At the educational session did you learn different treatment options to manage menopause? Yes No

2. Did you make any behavioral health changes since attending the session? Yes No

11. What are the two most common hormones that are replaced by hormone replacement therapy?
    a) Testosterone
    b) Estrogen
    c) Pheromones
    d) Progesterone

12. What are the long-term risks of hormone replacement therapy?
    a) Breast Cancer
    b) Endometrial cancer
    c) Blood clots
    d) Heart attack/stroke
    e) All of the above

13. Where can you find phytoestrogens or "natural" estrogens?
    a) Cereals
    b) Vegetables
    c) Beans
    d) Fruits
    e) Some herbs
    f) Chocolate

14. Estrogen is produced in the ovaries.
    a) True
    b) False

Enter last 4 digits of your telephone # _____

THANK YOU!